An Essay on Investigating Factors Influencing Comprehensibility of World Englishes by Critically Evaluating Studies in the Domain

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ABSTRACT

This paper uncovers the factors that influence *comprehensibility* – a construct predominantly the focus of Applied Linguistics research due to the dual role that speakers and listeners play in interpreting meaning. The essay discusses the factors highlighted by Smith & Nelson, (1985) outlined in their seminal paper. The critical evaluation of the research published in the domain extrapolates; *comprehensibility* between interlocutors – NS-NNS and NNS-NNS is not impeded by the accentedness of NNS's, but predominantly by the lack of familiarity with it. NNS's *comprehensibility* for both native listeners/raters and non-native listeners/raters improved with familiarity with the interlocutor or with the variety of World English (WE). Research also emphasized the factors: the interlocutor's proficiency, L1 interference in L2 utterance, attitude towards WE's, listeners/raters background, and effort to communicate greatly influenced *comprehensibility*. Awareness of the NNS's accent made the listeners/raters overlook other errors of accent either segmental, supra segmental and even lexico-grammatical errors (Webb *et al*., 2016). In case of NS-NNS communi-cation, it is an unrealistic expectation of the NNS to achieve native like accentedness to make the *comprehensible*. In high stakes tests like TOEFL and IELTS, the raters could improve L2 *comprehensibility* by gaining exposure to World English's. Teachers are advised to include pronunciation in their syllabi. In particular, they could stress on teaching those segmental and supra segmental features which are characteristic of learners L1 that influence erroneous L2 utterances.

Keywords: Comprehensibility, Familiarity, Factors, Comprehensibility, Domain, and Accentedness.

INTRODUCTION:

A general misconception prevailed that intelligibility and comprehensibility were two interchangeable con-structs until these two terms were differentiated by Smith & Nelson, (1985). They defined intelligibility as "the recognition of a word uttered" while *compre-hendsibility* was "understanding the meaning of the word utterance" (Smith & Nelson, 1985). *Compre-hensibility* has been the focus of researcher sowing to the increasing number of interlocutors of English with more Non-Native Speakers (NNS) than Native Speakers (NS) geographically placed in the expan-ding circle and the outer circle countries the three circles of Kachru, (1985). The inner circle comprising NS i.e. British, North American, Australian and New Zealand. Extensive cross cultural interaction between NNS - NNS occurs through English as an Interna-tional Language (Pickering, 2006). Lately, it has attained the status of English as a Lingua Franca (ELF) defined by Seidlhofer, (2004) as the "contact language". According to Seidlhofer, (2004), ELF in its "purest form" is used by the expanding circle L2 users. Presently, it is imperative for NS and NNS to comprehend the accentedness of other varieties of

World Englishes (WE) commonly known as Global Englishes (GE) – a term coined by Jenkins, (2002).

Factors Affecting L2 *Comprehensibility*
In their summary, Smith & Nelson, (1985) have raised certain future research implication questions that highlight factors which can govern *comprehensibility* of interlocutors:

1) **English proficiency of both speakers/ listeners**: proficiency of the interlocutors improves *comprehensibility.*

2) **Topic difficulty for both speakers/listeners**: mitigates *comprehensibility* of L2 utterance.

3) **Communicative setting or location of the discourse** e.g. noisy or quiet.

4) **Familiarity of interlocutors**: either at an individual level or with the variety of WE improves c*omprehensibility*.

5) **Interlocutors attitudes towards different varieties of WEs**. If the native/non- native listeners and raters possess reproving attitude towards other varieties of English, *comprehensibility* of L2 utterances is mitigated.

6) **Comprehensibility of NNS to NNS with different L1s**. Non-native speakers' *comprehensibility* increases for Non-native listeners/raters with different first language if there is a similarity in accents or if they are already exposed to it.

7) **Comprehensibility of NSs to NNSs**. Awareness of native accents aids NNSs to improve the incomprehensible segments of their utterances.

8) **Interlocutor's effort to communicate**: greatly influences their *comprehensibility*.

To validate the mentioned factors, studies addressing these factors for efficient *comprehensibility* between interlocutors will be critically analysed henceforth.

Critical analysis of studies investigating factors:

Listener's/ Speakers Proficiency
Isaacs & Trofimovich, (2012) investigated the effect of experience of raters on their comprehensibility ratings to feature them in high stakes rating scale guidelines. The researchers also probed the linguistic aspects that efficiently differentiated between learners at the low, intermediate and high levels of L2 *comprehensibility*.

An eight framed picture story was narrated in English in a quiet office to avoid any outside noise distraction. Later, quantitative analysis of the speech of

40 French learners of English was rated by 60 inexperienced NSs for comprehensibility ratings. Linguistic features were slotted under four main categories: phonology, grammatical accuracy, lexical richness, and story cohesion. To authenticate the novice raters markings, a coding scheme was invented by three experienced ESL teachers (T1, T2 and T3).

Each of the 40 Quebecois Francophone speakers (13 male, 27 females) belonged to varied age groups (Mage = 35.6, range = 28-61). All of the participants had already participated in L2 phonological learning (Trofimovich *et al*., 2007). Each had similar exposure to L2 – 45 minutes/week ESL classes in primary schools with 3hr/week of subsequent ESL instruction. As L2 speakers were of different age range, memory of the English learnt at school level could be of varied depending upon the time that had passed.

Four categories of *comprehensibility* measures were short listed: *phonology* comprising of segmental (vowels and consonants sounds) and supra segmental measuring (prosodic features); *fluency* involving temporal measures (speech rate) and frequency counts of pauses; *linguistic resources* – grammatical and lexical measures. The last category was *discourse*: capturing speaker's story telling strategies.19 linguistic features were emphasized as framework of scale, but for convenience of teachers and raters, 5 measures were short-listed.

After grammatical errors, vocabulary and fluency were most commented upon by teachers. It was observed that the higher the *comprehensibility* of the L2 speaker, the better the production of fluent utterances. Moreover, proficient speakers possessed sufficient vocabulary to narrate the story, but the converse was true for the medium and less proficient L2 speakers.

The researchers overcame most confounding variables through triangulation using mixed method analysis. The diverse age group of participant's ensured heterogeneity in the proficiency levels of the Francophone's, but participants self-reported their proficiency levels. Their professional engagements, which were not specified, may have required them to speak with NS or other NNS. The limitations of the study were clearly outlined. Since only Francophone's participants were selected, the generalisability to other L1 speakers becomes inapt. Also, participant's speech was tested through formulation of a picture story which was considered ecological,

but spontaneity of speech produced during a direct discourse between NS-NNS may be more indicative of a natural setting and may have produced different results of *comprehensibility* as a construct.

One of the three teachers (T3) pointed out the segmental features while the rest (T1 & T2) commented only on the grammatical errors which might be due to their ESL background. Also, T2's comments on low-comprehensibility of L2 learners were about the lack of teachers' familiarity with the L1 accent, the context, and contents of the picture story that could support in understanding their speech. Moreover, since the Francophone's had already participated in a previous study, they were familiar with the researchers symptomatic of the individual familiarity factor pointed out by Smith & Nelson, (1985).

Nevertheless, Isaacs & Trofimovich, (2012) were able to confirm some of the factors influencing *comprehensibility* mentioned by Smith & Nelson (1985) i.e. its dependence on the listeners/speakers proficiency not only lexicogrammatical but segmental and the requirement of a quiet settings. The study also suggested the individual familiarity factor in assisting L2 *comprehensibility.*

NNSs L1 Interference:

Crowther, Trofimovich, Saito, & Isaacs, (2015) investigated the factor of L1 interference on listener's judgements of *comprehensibility and accentedness* in L2 speech. 45 tertiary-adult speakers from three L1 back-grounds Chinese, Hindi and Farsi performed the same picture narrative task used in Isaacs & Trofimovich, (2012). They were rated by 10 NS and the findings were relative to the speakers L1. Chinese speaker's comprehensibility was affected by pronunciation variable (segmental errors). Hindi speaker's speech was affected by lexicogrammar variables where as Farsi speakers revealed no specific variable association. Tests of interactions revealed significant effect sizes of each L1 group's *comprehensibility* with Hindi (p< 0.0001) and Farsi (p<0.0001) being the more comprehensible while the Chinese to be less comprehensible and most accented group than the other two groups. To overcome the lack of familiarity factor with L2 accents, the10 NS raters selected were familiar with the respective Asian accents. The NS raters easily comprehended the Farsi speakers (variable association) narration because they studied in the same university thus familiar with their individual accents. Even thought he familiarity factor was cont-

rolled considerably, the lack of variable association found for Farsi speakers could have been more evident if the researchers used a more nuanced approach to fine tune the sliding test scales. While it was not a direct interaction, the researchers were able to overcome most of the confounding variables in a controlled environment. The *comprehensibility* of NS listeners judgement of NNS speech was affected by NNS'sL1 interference.

Familiarity & Rater's Background
Saito & Shintani, (2016) investigated the perception of L2 accentedness by two groups of native speakers – monolingual Canadians and multilingual Singaporeans. In an earlier study, Saito & Shintani, (2016) deciphered the correlation between the raters background to the linguistic features that are required by NNS to make them successfully comprehensible.

In the precursor study, they listened to 50 Japanese learners' spontaneous speech samples and rated them on a 9 point scale (1= easy to understand and 9 = difficult to understand). Through a paired *t*-test, it was revealed that the Singaporean raters were more lenient in assigning comprehensibility scores (*M*= 4.0, SD=1.5) as compared to the Canadian raters (M= 4.7, SD=1.5) of the speech samples. A multiple regression analysis revealed that the Canadian Raters focused more on pronunciation, fluency, vocabulary, and grammar, while the Singaporean raters focused more on the lexicogrammatical aspects of speech for *comprehensibility* judgements.

To investigate the L2 accentedness rate (the measure of closeness to native like accent) the researchers compared the accentedness scores with those of L2 *comprehensibility* judgements scores of the precursor study.

A picture description task was employed in which the speakers had to describe 7 pictures within 5s preparation time. To ensure spontaneity, three cue words were provided. The first four pictures were given for practice while the last three were tested as speech samples. The Japanese learners were of different proficiency levels owing to the difference in age and length of stay in Canada ranging from 6months to 11 years. The longer the stay the more probability of native like accentedness (Fuentes, 2021).

Out of the 10 native Canadian monolingual raters, 3 had beginner or intermediate knowledge of French. Ten Singaporean multilingual raters also judged the

speech. While the Singaporean spoke predominantly English at home/school/social settings (68 - 82.5%), but in daily communication, they also used Mandarin, Malay, and Tamil (11- 21%). The findings revealed that the monolinguals assigned higher and stricter ratings than the multi-lingual of L2 accentedness but both highlighted phonological aspects of the NNSs speech.

Most of the conflated variables were overcome by Saito & Shintani, (2016) by employing experienced coders to compare the ratings of the monolinguals and multilinguals. These coders were trained in phonology. Nonetheless, 3 monolinguals knew French which may weaken the trait of being monolingual, but the rater's attitudes towards accentedness may have prompted the 3 French speaking monolinguals to rate the speech strictly. The ecological validity was limited because the element of spontaneity was mitigated by the rehearsals before the actual task. In an actual communicative setting, an interaction between NS (Monolinguals and Bilinguals) and NNS through dialogue may have reproduced a more natural setting for judging comparison of linguistic background *comprehensibility* variability.

However, it is evident from the results of both the precursor study and the later one by Saito & Shintani, (2016) that the rater's background affects the perception of L2 accentedness and comprehensibility. Since Singaporean raters were familiar with multiple languages and various models of GE, they developed *comprehensibility* of accentedness as compared to the monolinguals. Also, the study highlights indirect interaction between two NNS of different L1s i.e. Singaporean NS but speaking Singaporean English (SE) with Japanese NNS thus covering another of Smith & Nelson's, (1985) factor governing L2 *comprehensibility*.

Topic Difficulty for Speaker and Listener

Saito, Webb, Trofimovich, & Isaacs, (2016) used the same methodology and employed the same participants as in Isaacs & Trofimovich, (2012), but instead of recording the first 30s- the entire picture story was recorded. A minimum length of 100 words threshold for robust lexical diversity was kept thus increasing speakers/listeners/raters difficulty. Raters judged the L2 comprehensibility high even when it was heavily accented. Another, reason for raters to ignore segmental and suprasegmental errors could be due to the raters being bilinguals NS of Canada with French as their L2. Rather than their *comprehensibility* getting mitigated by accentedness, rater's familiarity with the accent made it easier for them to comprehend L2 speech and focus on lexical complexity and appropriateness instead.

Interlocutor's effort to communicate

Derwing, Munro, & Thomson, (2008) conducted a longitudinal study using a mixed-method analysis over a span of two years to compare improvement in comprehensibility and fluency of Slavic and Mandarin speakers. Prior to ESL classes both the types of speakers were of the same proficiency levels, but Slavic speakers showed improvement in both fluency and comprehensibility as compared to Mandarin speakers owing to out of class interaction with NS. While Mandarin speakers had no willingness to communicate with NS, as they belonged to a close knit Chinese community - indicative of one of the factors pointed out by Smith and Nelson, (1985) i.e. interlockutors effort to communicate. Derwing *et al*. (2008) study suggested evidence of amore ecological communication between NSs–NNSs unlike the previous ones which indicated the NSs-NNSs interaction in experimental settings.

Comprehensibility of NNS-NNS with different L1s

Kang, Vo, & Moran, (2016) conducted a comprehensive research with a large sample size to weigh the perceptions of NNS listeners with different L1s of Vietnamese speech (NNS) for segmental and suprasegmental variation in second language. 247 listeners (American, Vietnamese, and Arabic) students rated 10 Vietnamese speech samples for comprehensibility, intelligibility and accentedness. For achieving traingulation, interviews were conducted from 112 raters.

Results suggested that NS (Americans) were less harsh in rating than NNS of different L1 (Arabic listeners) since Arabic listeners were not familiar with the accent. A significant difference was observed in global comprehensibility ratings of segmental (consonants over vowel) that took precedent with NS-NNS for Vietnamese speakers in EFL settings unlike Arabic speakers in ESL settings who focused more on suprasegmental-word stress. Also, the teaching instructions played a substantial role in determining the EFL & ESL speaker's perception of more crucial parts for pronouncing L2 words.

CONCLUSION AND RECOMMENDATIONS:

It can be construed by the critical analyses of the studies that certain factors influence L2 *comprehensibility* speech more as compared to others (overview shown in **Table 1** provided in the Appendix). The foremost amongst the ones outlined by Smith & Nelson, (1985) is the factor of familiarity either with an individual or with the accentor with the variety of WE. Familiarity with the accent was commonly observed in Isaacs & Trofimovich, (2012), Saito & Shintani, (2016), Kang, Vo, & Moran, (2016) to support Native/Non-Native listeners *comprehensibility* of L2 utterances. Exposure to the NNS's accent made the listeners/raters overlook other errors of accent either segmental, suprasegmental or even lexicogrammatical errors (Webb *et al*., 2016). Thus indicating that in case of NS-NNS communication, it is an unrealistic expectation of the NNS to achieve native like accentedness to make themselves *comprehensible* (Derwing & Munro, 1997; Jenkins, 2000; Munro & Derwing, 2011). Importantly, *accentedness* should not be conflated with *comprehensibility* and Levis, (2005) clarifies the misconception that L2 learners need not sound like NS and eliminate all their L1 accentedness to gain *comprehensibility*. However, responsibility should also be placed on the NS/raters to have exposure to other varieties of World Englishes particularly in high stakes tests like International English Language Testing System (IELTS) and Test of English as a Foreign language (TOEFL). Hence, it is undeserved to judge L2 learners' intellect and capability on the basis of accentedness as *comprehensibility* is not mitigated by it.

L1 interference is another significant factor that curbs L2 *comprehensibility*. Teachers/ course designers should include pronunciation in their syllabi. In particular, a focus on teaching those segmental (consonant- vowel) and suprasegmental (word stress, intonation and fluency) features which are characteristic of learners L1 that influence erroneous L2 utterances. For example, teaching Japanese and Chinese learner's consonant placement sound (segmental) observed in Suzukida & Saito, (2019) could be helpful in mitigation of *incomprehensible* output. Similarly, French learners could benefit from word stress and intonation. Thus, teachers should address L1 incomprehensible interferences.

Unquestionably, *comprehensibility* as a construct involves two stakeholders; listeners and speakers either in NS – NNS or NNS – NNS communicative settings and both interlocutors should strive to overcome the factors outlined above. Teachers can play an instrumental role in improving L2 *comprehensibility* by increasing the proficiency in all the four categories of speech: phonology, fluency, lexicogrammar, and discourse.

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CONFLICTS OF INTEREST:

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APPENDIX:

Table 1: Overview of factors highlighted by each of the studies discussed in the essay.

S.N	Studies/ Researches	Highlighted factors of L2 *Comprehensibility*	Comments
1	Isaacs & Trofimovich (2012)	*Listener's/ Speakers Proficiency* *Familiarity & Rater's Background* *Quiet settings*	The study established the requirement of proficiency for *comprehensibility* of both L2 speakers and raters. 60 novice raters pointed only pronunciation errors while 3 ESL teachers detected grammatical, segmental & suprasegmental of 40 French speakers. Teacher's familiarity with French accent aided L2 *comprehensibility*. Quiet settings enabled listening.
2	Crowther, Trofimovic, Saito, & Isaacs, (2015)	*NNSsL1 Interference*	Chinese, Hindi/Urdu & Farsi speakers *Comprehensibility* was judged by 10 Canadian NSs. Chinese speech was affected by segmental errors, Hindi L1sspeech was affected lexicogrammatically, while Farsi L1s remained immune to any specific erroneous characteristics. However, the raters' lack of familiarity with the accents may have reduced L2 *comprehensibility*.
3	Saito & Shintani, (2016)	*Familiarity & Rater's Background* *Comprehensibility of NNS* *To NNS with different L1s*	Multilingual Singaporean raters were less strict in judging the L2 speech of Japanese L2 speakers in comparison to Canadian NSs (highlighting phonological aspects) while the Singaporean raters' also examined the appropriacy/complexity of L2 lexicogrammar. Raters' background & familiarity with multiple languages and accents dictated their perception. Research also established Japanese NNSs comprehensibility to Singaporean NNSs

4	Suzukida & Saito (2019)	*NNSs L1 Interference*	Two tasks were performed by 40 Japanese speakers first in EFL settings to check Functional Load (FL). Second by 40 Japanese learners with varied proficiency in native speaking countries. Both proficiency levels Japanese L2 speakers showed high (FL) of errors of segmental substitution (e.g. mispronunciation of/l/as/r/or/v/as/b/ that mitigated NSs *comprehensibility*.
5	Saito, Webb, Trofimovich, & Isaacs, (2016)	*Topic Difficulty for Speaker & Listener* *Familiarity & Rater's Background*	The same French L2 participants and the same picture story used in Isaacs & Trofimovich, (2012) were employed. Instead of first30sthe entire narration was recorded (100 words minimum) which increased the difficulty level for both the interlocutors. Since the raters were bilingual Canadian NSs with French as their L2, familiarity withL1 accent assisted *comprehensibility.*
6.	Derwing, Munro, & Thomson, (2008)	*Interlocutors effort to communicate*	Longitudinal study with mixed method analysis to compare the improvement of L2 *comprehensibility* of Slavic and Chinese learners. Slavic speakers showed improvement because of out of class efforts to communicate with NSs interlocutors which the Chinese showed no proclivity for.
7	Kang, Vo, & Moran (2016)	*Comprehensibility of NNS- NNS with different L1s.* *Familiarity & Rater's Background*	10 Vietnamese L2 speakers were rated by 247- Arabic, Vietnamese, and NSs in EFL and ESL settings. The study highlighted comprehensibility between NNS Arabic. Vietnamese who rated them more strictly as compared to American NSs because Arabs were unfamiliar with Vietnamese accent.